

REMARKS

Applicant is in receipt of the Office Action mailed November 25, 2005.

Claim Status

Claims 1-10, 13-17, 20-28, 30, and 32-41 were pending prior to entry of the present amendment.

Claims 1, 3, 6, 8, 21, 25, 27, 32, 33, and 37 are herein amended.

Claims 11-12, 18-19, 29, and 31 have been canceled.

Claims 1-10, 13-17, 20-28, 30, and 32-41 are now pending.

Rejections Under Section 112

Claims 8-10 and 13 were rejected under section 112, as being indefinite. Specifically, the Office Action states that claims 8-10 and 13 recite "means" without these means ever being defined in the specification. The specification was objected to because it does not illustrate the means for claims 8-10 and 13. The drawings were also objected to because they do not illustrate the means listed in claims 8-10 and 13.

The "means for calculating partial sums" is illustrated at least in Fig. 11 (800A-D) and described on page 17, line 24.

The "means for passing accumulated partial sums..." is illustrated at least in Fig. 11 (850A-C) and described on page 19, lines 2-9 (partial sums bus).

The "means for storing sample values" is illustrated at least in Fig. 11 (805A-D) and described on page 17, line 31 (805 X).

The "means for rendering samples" is illustrated at least in Fig. 2 (RP 0-3) and described on page 7, lines 1, 3, and 28.

The "means for converting the pixel values to video output signals" is illustrated at least in Fig. 3 (VIDEO SUBSYSTEM) and described on page 13.

Applicant respectfully requests the 112 rejections of claims 8-10 and 13, and the objections to the drawings and specification regarding claims 8-10 and 13 be withdrawn.

Allowable Subject Matter

The Office Action states that claims 14-17, 20, and 39-41 are allowed; claims 8, 9, 10, and 13 would be allowed if the 112 rejection were overcome; and claim 28 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

The 112 rejections of claims 8, 9, 10, and 13 are answered above and therefore claims 8, 9, 10, and 13 are allowable. Claim 8 was amended to make the use of the element "means for storing sample values" consistent.

Rejections Under Section 103

Independent claim 1 was rejected under 35 U.S.C. §103(a) as being unpatentable over Wilson (USPN 5129092) in view of Willson, Jr. et al. (USPN 6553397; hereinafter referred to as Willson).

Independent claims 21, 23, and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wilson in view of Willson as applied to claim 1, and further in view of Inada et al. (US 2004/0004620; hereinafter referred to as Inada).

Dependent claims 2-7, 22, 24, 26-27, 30, and 32-38 were rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of Wilson, Willson, Inada, Cloutier (USPN 5892962), and Hsieh et al. (USPN 6819321)

Claim 1 recites:

A computer graphics system for generating pixels from a distributed convolution of rendered samples comprising:
a plurality of sample managers connected in series; and
a set of partial sums buses, wherein each partial sums bus connects one of the sample managers of the series to the next sample manager in the series;
wherein each sample manager is operable to calculate partial sums for a corresponding portion of the rendered samples located within a convolution

kernel corresponding to a pixel location, wherein the partial sums comprise 1) a sum of weights determined for locations of the rendered samples in the portion of rendered samples and 2) a sum of weighted sample values for the portion of rendered samples, wherein each of the second through the last sample manager in the series is operable to add the partial sums calculated for its corresponding portion of the rendered samples to any previously accumulated partial sums received from the prior sample manager in the series, and if not the last sample manager in the series, output new accumulated partial sums to the next sample manager in the series.

Wilson and Willson, either singly or in combination do not teach a computer graphics system for generating pixels from a distributed convolution of rendered samples. In fact, there is no use of any of the terms “pixel”, “render”, “rendered samples”, or “convolution kernel” in Wilson or Willson. Therefore, Wilson or Willson do not teach or render obvious the limitations of claim 1 “each sample manager is operable to calculate partial sums for a corresponding portion of the rendered samples located within a convolution kernel corresponding to a pixel location”.

Willson identifies the “Field of the Invention” in column 1, lines 30-32: “The present invention relates to systems and methods of digital filtering, and in particular to low-power pulse-shaping digital filters.” The field of low-power pulse-shaping digital filters is not an analogous field for one skilled in the art of computer graphics.

Therefore, Applicant submits that claim 1 and its dependent claims are non-obvious and patentably distinguished over Wilson and Willson for at least the reasons given above.

Applicant further submits that the independent claims 21, 23, and 25 and their dependent claims are also non-obvious and patentably distinguished over Wilson and Willson for at least the reasons given above in support of claim 1.

CONCLUSION

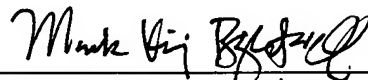
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5681-59700/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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